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CDC's Role in HIV and AIDS Prevention

As part of its overall mission of reducing illness and death worldwide, CDC provides leadership in preventing and controlling human immunodeficiency virus (HIV) infection by working with community, state, national, and international partners. CDC's programs include support for state and local prevention activities; a national public information network; education programs in the nation's schools; disease monitoring; and laboratory, behavioral, and epidemiologic studies designed to identify the most effective interventions to combat HIV. Major research and program areas include:

Basic Science

CDC conducts basic science research to enhance our understanding of the mechanisms of HIV infection and disease progression. This research ranges from the search for more effective diagnostic tools to applied research on immune mechanisms that may protect individuals from infection.

Monitoring the Epidemic

Since the epidemic began, CDC has worked with state and local communities to track the course of HIV and AIDS. CDC has numerous surveillance programs and studies to monitor the occurrence of HIV infection, disease, and death; behaviors that place people at risk; and HIV-related knowledge and testing behaviors. This information is designed to provide communities the most complete and timely information possible on ongoing and emerging trends.

Prevention Research

CDC researchers continuously work to evaluate new tools and techniques for preventing HIV transmission. Both biomedical and behavioral interventions are examined, as well as promising integrations of the two approaches. For example, as AIDS increasingly affects women, it is critical that prevention methods be developed that are easily within women's control. CDC researchers are working with scientists worldwide to evaluate the effectiveness of female condoms and to develop effective microbicides that can kill HIV and the pathogens that cause other STDs. As with any new tool for prevention, scientists must also determine what influences people's willingness and ability to use these methods. CDC behavioral scientists are simultaneously working to evaluate the factors that will contribute to women's use of these products and how these new prevention methods can and should be balanced with existing prevention options.

Vaccine Research

CDC collaborates with scientists and researchers on HIV vaccines by providing expertise in the areas of site selection and virologic and immunologic investigations. CDC also provides representation for data safety and monitoring boards to oversee the conduct and evaluations of vaccine trials. CDC is working with other organizations to develop links between communities and scientists related to the field of vaccine and other research.

Putting Effective Prevention Tools in the Hands of Communities Affected

CDC scientists also work with communities to determine the impact of HIV prevention programs and how programs may be improved. Nearly two decades into the epidemic a great deal is known about what approaches work best for various populations at risk. CDC has developed new tools for more effectively getting the best available science on prevention into the hands of communities affected. For example, CDC researchers have assimilated and analyzed all available studies to date that evaluate the impact of prevention programs and created a Prevention Research Synthesis (PRS) database. The PRS database incorporates all well-conducted evaluations of the full range of HIV prevention programs, from school-based education to street outreach for injection drug users. From these studies, CDC prevention modules are developed to provide communities the tools needed to replicate effective programs. CDC believes these tools can help extend the reach of effective prevention efforts.

State and Local Prevention Activities

In addition to providing the science to guide prevention, CDC funds HIV prevention programs for high-risk populations through 65 state and local health departments, 22 national and regional minority organizations, 10 national business, labor, and faith partnerships, and 94 community-based organizations.

To ensure programs are comprehensive, culturally competent, and scientifically sound, the programs funded through state and local health departments must be designed based on the HIV Community Planning process. Community planning is a process which shares the responsibility for priority-setting with representatives from the communities for whom services are intended. The process also requires that local programs address local trends in the HIV epidemic.

School-Based Prevention

In 1987, CDC launched a national program to help schools and other youth-serving agencies deliver effective HIV-prevention health education. The impact of these efforts is assessed through applied surveillance and evaluation research, which is provided to communities to help them best address their unique local HIV/AIDS needs.

CDC puts prevention tools into the hands of education agencies in every state, the District of Columbia, American Samoa, Guam, Marshall Islands, Northern Mariana Islands, Puerto Rico, Virgin Islands, and 18 large U.S. cities. CDC provides financial support and translates biomedical and behavioral research into practical interventions, so that schools and other agencies serving youth can implement effective HIV prevention education for youth. Major activities include training teachers, developing and disseminating educational materials, and monitoring and evaluating program activities.

Prevention in Occupational Settings

CDC assists the U.S. Public Health Service, state and local health departments, hospitals, and professional organizations worldwide in the prevention and control of nosocomially acquired HIV infection. While the risk of occupational HIV transmission is low, CDC maintains programs to further reduce occupational HIV transmission. Health care workers are at highest risk of occupational HIV transmission. The primary emphasis of prevention efforts is implementation of universal precautions. With universal precautions, the health care worker treats blood and other body fluids from *all* patients as potentially infectious. In addition, CDC and other organizations and private companies are working to develop safer medical devices that will further reduce the risk of exposure to HIV and other infectious agents. Finally, while the best protection is to prevent HIV exposure, studies have found that administering antiretroviral therapy immediately following an exposure may reduce the risk of the worker developing HIV infection. CDC recently issued guidelines for the management of health care worker exposures to HIV and recommendations for postexposure therapy (PET).

As the lead agency for HIV prevention in the United States, CDC will continue to improve both biomedical and behavioral strategies to combat the HIV epidemic as it evolves. Clearly, multiple strategies, through these and other programs, are required to maintain and improve progress in prevention.